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REINFORCING SYSTEM FOR STACKABLE RETAINING WALL UNITS

BACKGROUND OF THE INVENTION

5 The present invention relates generally to an improved
system for stabilizing retaining wall structures, and
particularly retaining wall structures which comprise a
plurality of individual blocks stacked in an array of
superimposed rows. More particularly, the present invention
10 relates to improved connector devices which provide and
facilitate attachment between selected individual blocks and a
remotely positioned stable anchoring assembly. By way of
explanation, the stable anchoring assembly may typically be in
the form of a geogrid, mesh, deadman, or the like, with the
15 anchoring assembly normally being disposed in on-site soils
which typically contain corrosion inducing salts and the like.

Retaining walls are in general use for a wide variety of
applications, including virtually any application where it is
necessary to hold or retain earth to prevent erosion or
20 undesired washing of a sloped surface or for general
landscaping purposes. Examples of such applications further
include retaining walls designed for configuring contours for
various landscaping projects, as well as those for protecting
surfaces of roadways, walkways, or the like from eroded soil
25 and earth. Because of their physical structure and for
protection of the wall from excessive hydrostatic pressures,
the wall is normally separated from on-site soils by a buffer
zone of clean granular backfill, such as, for example, crushed
rock, binder rock, or the like. Such buffer zones assist in
30 drainage, while at the same time assist in reducing
hydrostatic pressure against the wall.

In order to achieve proper stabilization of the erected retaining wall, a geogrid, deadman, wire mesh system, or other anchoring means buried remotely from the retaining wall and disposed within the on-site soil is utilized to positionably stabilize, hold, or otherwise restrain individual blocks or groups of blocks forming the array against movement or motion. Selected blocks comprising the wall are coupled to the anchoring means. Various forms of coupling means have been utilized in the past, they have typically been designed to be captured within the block structure, and thereafter fixed directly to the anchoring means. Little, if any, length adjustment has been possible in the coupling means, thereby making the interconnection less than convenient. As such, the ultimate interconnecting operation can be time consuming due to the necessity of configuring coupling means to fit the block wall. Also in those coupling devices which are permanently fixed to the block, pallet stacking densities of blocks to be shipped may be reduced. The present invention facilitates the interconnection process by utilizing a coupling means which includes a standard keeper frame together with elongated couplers of adjustable or assorted lengths. Individual blocks comprising the retaining wall structure are provided with a hollow core along with an access bore extending from the rear block surface to the inner wall of the core. This arrangement makes it possible to utilize a single block structure which may be tightly palletized as any standard block design, with the block having a structure which facilitates secure attachment of the coupling means to individual blocks, with the coupling means being, in turn, produced conveniently in selective and appropriate lengths for ready attachment or fastening to the stable anchoring assembly.

SUMMARY OF THE INVENTION

In accordance with the present invention, a coupling means for securing individual blocks in a retaining wall to a stable remote anchoring assembly. The coupling means includes
5 a keeper device with an elongated fastener having one end secured to the keeper frame, and with the opposed end being linked to the anchoring assembly. The individual blocks are hollow core structures having bores extending from the rear wall surface through the web of the block into the hollow
10 core. The keeper assemblies are designed to receive and retain the elongated fastener therewithin. The keeper frame is sized for retention within the block core, while various lengths of fasteners are provided to achieve and facilitate the interconnection between individual blocks and the stable anchoring assembly. The fasteners may be length adjustable in
15 order to facilitate or accommodate taut or tight interconnects. In this fashion, a stabilized retaining wall is formed with a universal coupler means being provided, the coupling means employing a standard keeper frame along with elongated couplers of a variety of lengths.
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Therefore, it is a primary object of the present invention to provide an improved interconnection between individual blocks in a retaining wall structure and a remotely positioned or disposed stable anchoring assembly.

25 It is yet a further object of the present invention to provide an improved interconnection system for use in joining individual blocks of a retaining wall to a remotely positioned stable anchoring assembly such as, for example, a geogrid, wire mesh, or dead-man.

30 Other and further objects of the present invention will become apparent to those skilled in the art upon a study of